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NARKOMED GS
TECHNICAL SERVICE BULLETIN # 2

Product: Narkomed GS

Status: Information

Date: August 6, 2003

Re: Functional check of exclusion system bushings for 2 and 3 vapor fixed mount devices

Reference Doc: SP00171- NMGS Exclusion system Enhancement

Reason/Rationale: To check the function of the exclusion system and to insure that non-functioning exclusion systems are repaired in the proper manner.

Solution/Procedure: Perform exclusion system test as per PMC section “6.8- Breathing System”, of the NMGS Service Manual.

Inform users to follow Daily Checkout Procedure, specifically, “Low Pressure System Verification- step 12c”, to check Exclusion System integrity.

Replace non-functional exclusion system bushings, as necessary during routine maintenance or service call. Refer to attached procedure for replacement of exclusion system bushings.

Devices affected: 2 and 3 Vapor NMGS Anesthesia Systems with Fixed Vaporizer Mounts

Timing/When: At next service or routine maintenance

Additional Info: Replaced parts (bushings and block housings) **are to be returned to DMI for analysis**. Please call 1-800-543-5047 to contact your Customer Care Area representative to obtain a Return Merchandise Authorization.

Cost: Replacement parts can be obtained at the then current list price. Cost to be borne by the customer, if applicable.

Ordering Info/Parts: Replacement parts:
4114721- Bushing-Exclusion
4113739- Block- Exclusion

Distribution: DrägerService, All Authorized Service Organizations

If you have any questions, please contact Technical Support by phone at 1-800-543-5047 or by fax at 1-215-723-5935.

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NMGS Exclusion Bushing Replacement Procedure

NOTE: The vaporizers do not have to be drained in order to complete this procedure.

WARNING: Do not tilt a vaporizer that contains anesthetic agent more than 45 degrees. Failure to observe this precaution will render the vaporizer handwheel calibration invalid.

NOTE: Should a vaporizer containing anesthetic agent be accidentally tilted more than 45 degrees, it must be drained and flushed in accordance with instructions given in the manual supplied with the vaporizer.

NOTE: Each vaporizer is held to the machine by two 3 mm socket head screws. These screws are located at the back of the vaporizer manifold, and are accessible by removing the cover from the interlock mechanism as shown in Figure 1.

1. Turn the System Power switch to STANDBY.
2. Set all vaporizer handwheels to their Zero or OFF position.
3. Remove the back cover from the vaporizer interlock mechanism. See Figure 1.
4. While holding the vaporizer, remove the mounting screws and carefully remove the vaporizer from the affected fixed mount location.

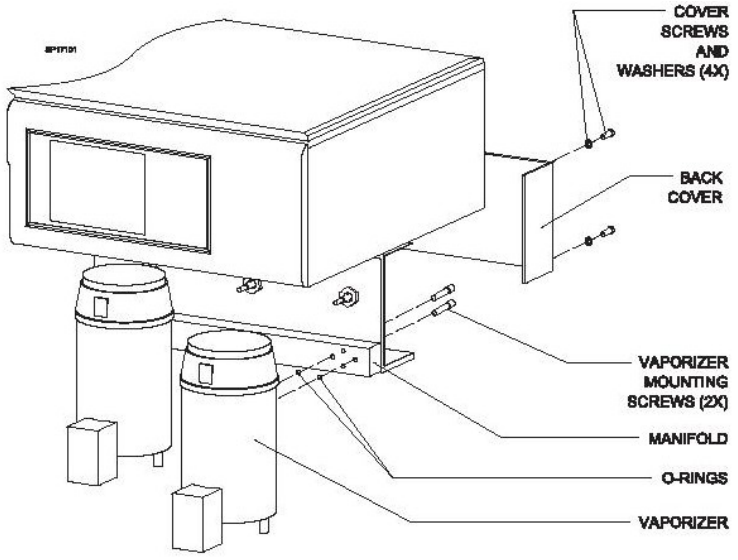

Figure 1: VAPORIZER REMOVAL

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5. If necessary, using a ¾ in. wrench, remove the remainder of the broken bushing from the (viewed from the front of the machine) vapor mount. See Figure 2.

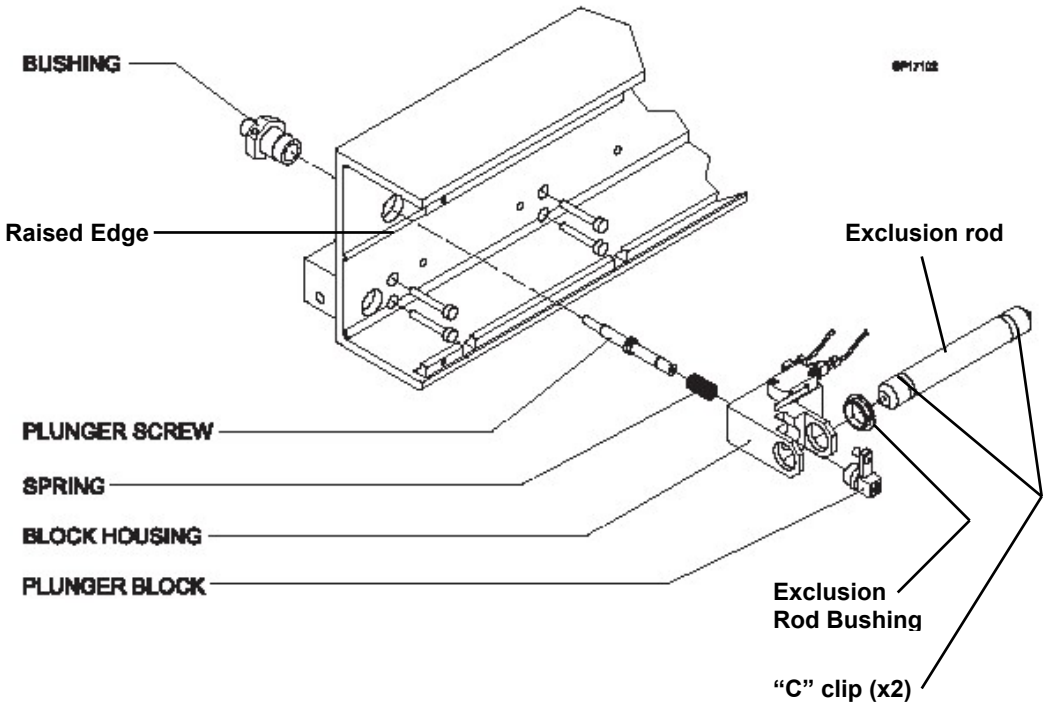

Figure 2: EXCLUSION SYSTEM ASSEMBLY

6. Remove the residual bushing material from exclusion system. If necessary remove the block housing to remove residual material. It may be necessary to replace the block housing if residual bushing material cannot be removed. If the block needs replacement/ removal, continue on with “Block Housing Replacement”, otherwise continue with Step 7.

   Block Housing Replacement/ Removal

   a. Remove the “C” clips on the exclusion rod(s) relative to the block housing being replaced. If the middle block housing has to be removed, both of the exclusion rods must be removed. Slide exclusion rod(s) out of block housing(s).

   b. Remove the micro switch from block housing.

   c. Remove plunger screw, spring and plunger block from block housing (clockwise to remove). Remove residual bushing material if possible from original block housing.

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d. Reassemble plunger screw (counter-clockwise), spring and plunger block, into new (or old block housing, if residual material is able to be removed) block housing.

e. Thread the plunger screw into the plunger block until the screw is flush with the plunger block (backside).

f. Switch over white exclusion rod bushings to new block housing.

g. Reinstall micro switch assembly.

7. While holding the block housing (rear of vapor mount), screw the new bushing into the block housing until snug (hand tight) then tighten 1/4 turn. Be careful not to over tighten as you may break the new bushing.

   NOTE: When tightening the bushing, verify that the block housing sits on and maintains contact with the raised edge along the inside of the vapor box.

8. If removed earlier, reinstall exclusion rod(s) and reinstall “C” clips.

9. Verify that the exclusion rod(s) rotate freely and move back and forth with minimal resistance.

10. Reinstall Vaporizer onto vaporizer mount (verify o-rings are in place) and tighten the mounting screws to a torque of 24 to 26.5 inch pounds.

11. **Exclusion Adjustment**- this procedure must be performed to insure proper adjustment and function of exclusion system. Refer to section “5.6- Vaporizer Interlock Adjustment, of the NMGS Service Manual”.

12. **Exclusion System Test**- perform section “6.8.1- Breathing System Leak/ Exclusion” of the NMGS PMC Procedure; located in the NMGS Service Manual.

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